WHAT IS CLAIMED IS:

1. A longitudinally coupled resonator type surface acoustic wave filter having a balance-unbalance conversion function, the filter comprising:

a piezoelectric substrate; and

first, second and third IDTs arranged on the piezoelectric substrate in a surface acoustic wave propagating direction, the second IDT being located between the first and third IDTS and having an even number of electrode fingers.

2. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, wherein the piezoelectric substrate is made of one of $LiTaO_3$ and $LiNbO_3$.

3. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, further comprising reflectors arranged in the surface wave propagating direction on the right and left of the region where the first, second and third IDTs are arranged.

4. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, wherein widths of the electrode fingers on each side of the second IDT are

larger than those of the remaining electrode fingers.

5. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, wherein the electrode fingers adjacent to the second IDT have opposite polarities.

6. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, further comprising a surface acoustic wave resonator connected between the first and third IDTs and a terminal.

7. A longitudinally coupled resonator type surface acoustic wave filter according to claim 1, wherein each of the first, second and third IDTs include narrow pitch electrode finger sections that are relatively narrower than others of the electrode finger sections included in the first, second and third IDTs.

8. A communication apparatus comprising the longitudinally coupled resonator type surface acoustic wave filter according to Claim 1.

9. A longitudinally coupled resonator type surface acoustic wave filter having a balance-unbalance conversion

function, the filter comprising:

first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters longitudinally coupled to each other, each of the first-stage longitudinally coupled resonator type surface acoustic wave and the second-stage longitudinally coupled resonator type surface acoustic wave filter including a piezoelectric substrate and first, second and third IDTs arranged on the piezoelectric substrate in a surface acoustic wave propagating direction;

an unbalanced signal terminal connected to one end of the second IDT of the first-stage longitudinally coupled resonator type surface acoustic wave filter;

a first balanced signal terminal connected to one end of the second IDT of the second-stage longitudinally coupled resonator type surface acoustic wave filter;

a second balanced signal terminal connected to the other end of the second IDT of the second-stage longitudinally coupled resonator type surface acoustic wave filter;

a first signal line connecting one end of the first IDT of the first-stage longitudinally coupled resonator type surface acoustic wave filter and one end of the first IDT of the second-stage longitudinally coupled resonator type surface acoustic wave filter; and

a second signal line connecting one end of the third IDT of the first-stage longitudinally coupled resonator type surface acoustic wave filter and one end of the third IDT of the second-stage longitudinally coupled resonator type surface acoustic wave filter;

wherein an electric signal propagating through the first signal line is 180° out of phase with an electric signal propagating through the second signal line.

10. A longitudinally coupled resonator type surface acoustic wave filter according to Claim 9, wherein the second IDT of at least one of the first-stage longitudinally coupled resonator type surface acoustic wave filter and the second-stage longitudinally coupled resonator type surface acoustic wave filter has an even number of electrode fingers.

11. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein the piezoelectric substrate of each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters is made of one of $LiTaO_3$ and $LiNbO_3$.

12. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein each of first-stage and second-stage longitudinally coupled

resonator type surface acoustic wave filters further comprises reflectors arranged in the surface wave propagating direction on the right and left of the region where the first, second and third IDTs are arranged.

13. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, widths of the electrode fingers on each side of the second IDT are larger than those of the remaining electrode fingers.

14. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, the electrode fingers adjacent to the second IDT have opposite polarities.

15. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters further comprises a surface acoustic wave resonator connected between the first and third IDTs and a terminal.

16. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, each of the first, second and third IDTs include narrow pitch electrode finger sections that are relatively narrower than others of the electrode finger sections included in the first, second and third IDTs.

17. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters have the same structure.

18. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, the finger electrodes of the first and third IDTs that are adjacent to the central second IDT are arranged to define ground electrodes.

19. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each

of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, the polarity of the electrode fingers of the second IDT is the same as the polarities of the electrode fingers of the first and third IDTs adjacent to the second IDT.

20. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters are symmetrical to each other.

21. A longitudinally coupled resonator type surface acoustic wave filter according to claim 9, wherein in each of the first-stage and second-stage longitudinally coupled resonator type surface acoustic wave filters, the second IDT is split into two parts.

22. A communication apparatus comprising the longitudinally coupled resonator type surface acoustic wave filter according to Claim 9.